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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Hin Leong Tan

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Group Art Unit: 2625

Title: DIGITAL SCANNING SYSTEMS AND METHODS FOR SCANNING MULTI-SIDED CARDS AND DOCUMENTS

COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

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Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on August 26, 2008.

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Respectfully submitted Hin Leong Tan .

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PATENT APPLICATION ATTORNEY DOCKET NO. 1026

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SUBJECT: DIGITAL SCANNING SYSTEMS AND METHODS FOR

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COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, VA 22313-1450

SIR:

APPEAL BRIEF

Appellant herein sets forth his reasons and arguments for appealing the examiner's final rejection of claims in the above-identified case.

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REAL PARTY IN INTEREST

This Patent Application has been assigned to Electronic Document

Technology Pte., Ltd. having a place of business in Singapore.

RELATED APPEALS AND INTERFERENCES

Appellant is aware of no related appeals or interferences.

STATUS OF CLAIMS

Claims 1 through 18 are extant in the case.

Claims 1 through 18 are rejected.

The appealed claims are claims 1 through 18.

STATUS OF AMENDMENTS

After the final rejection, Appellant filed a Response to Office Action dated June 23, 2008. In the Response to Office Action, no amendments were made to the claims.

SUMMARY OF CLAIMED SUBJECT MATTER

In general, the present invention allows a scanner (26) that scans both sides of a business card to be effectively utilized by an application program (20) that is constrained to display only a single scanned image. The scanner source program (24) includes the ability to accumulate and stitch together a composite image (Figure 3B, Figure 3C) that includes images of both sides of the business card. The composite image (Figure 3B, Figure 3C) is passed to the application program (20) as if it were a single image. See the Specification at page 1.

Independent Claim 1:

Claim 1 sets out a method of scanning multi-sided documents. A TWAIN source (24) is used to control scanning of multiple sides of a multi-sided document by a scanning device (26). See Figure 1 and the Specification at page 4, lines 7 through 16. The TWAIN source (24) produces a composite image (Figure 3B, Figure 3C) by tiling the images of individual sides of the multi-sided document vertically (Figure 3B), horizontally (Figure 3C), or a combination of vertical and horizontal placements. See Figure 3B, Figure 3C and the Specification at page 5, lines 1 through 9. The TWAIN protocol is used to transfer the composite image (Figure 3B, Figure 3C) from the TWAIN source (24) to an application (20) running on a computing device. See the Specification at page 5, lines 15 through 18.

Independent Claim 7:

Claim 7 sets out a method of scanning multi-sided documents. A TWAIN source (24) is used to control scanning of multiple sides of a multi-sided document by a scanning device (26). See Figure 1 and the Specification at page 4, lines 7 through 16. A single composite image (Figure 3B) for the multi-sided document is transferred from the TWAIN source (24) to a TWAIN application (20). See the Specification at page 5, lines 15 through 18. The single composite image (Figure 3B) is produced by the TWAIN source (24) and is composed of vertically tiled images. Each of the vertically tiled images is an image of one side of the multi-sided document. See Figure

3B and the Specification at page 5, lines 1 through 5. The single composite image (Figure 3B) is transferred by sequentially scanning and transferring consecutive image rows of each side of the multi-sided document using a TWAIN buffered memory transfer method. See Figure 7, and the Specification at page 9, lines 7 through 15.

Independent Claim 13:

Claim 13 sets out a method of scanning documents. A TWAIN source user interface (Figure 4) is displayed. The TWAIN source user interface (Figure 4) allows a user to select scanning of a multi-sided document. See Figure 4 and the Specification at page 5, lines 10 through 26. A TWAIN source (24) is used to control scanning performed by a scanning device (26). See Figure 1 and the Specification at page 4, lines 7 through 16. When the user selects scanning of a multi-sided document, the TWAIN source (24) creates a single composite image (Figure 3B, Figure 3C) that includes images of all sides of the multi-sided document. See Figure 3B, Figure 3C and the Specification at page 5, lines 1 through 9. The TWAIN source (24) forwards the single composite image (Figure 3B, Figure 3C) to an application (20) running on a computing system. See the Specification at page 5, lines 15 through 18.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following issues are presented for review:

(1) Claims 1 through 18 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over USPN 5,717,941 (*Yoshida*) in view of USPN 6,686,930 (*Powers*).

ARGUMENT

A. Overview Specifying Errors in the Rejection of the Claims

Obviousness under 35 U.S.C. § 103 is a question of law based on the following factual inquiries: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 567 (1966).

A prima facie case of obviousness must be based on properly ascertaining the scope and content of the prior art and recognizing the differences between the prior art and the claims at issue. See, for example, the USPTO explanation of the use of the test in *Graham v. John Deere Co.* for the establishment of a prima facie case of obviousness as set out in MPEP 2143. The examiner's rationale for the rejection under 35 U.S.C. § 103 has failed to properly carry out the first two factual inquiries set out by *Graham v. John Deere Co.* and thus has failed to lay the proper foundation for a prima facie case of obviousness. The examiner's failure to articulate the difference between the prior art and the claims at issue has resulted in a failure to present an analysis that supports a finding of obviousness

In the sections below, Appellant points out how the examiner has filed to properly carry out the first two factual inquiries set out by *Graham v. John Deere Co.* and how each of the independent claims 1, 7 and 13 are separately patentable over the art cited by the Examiner.

B. Brief Description of Yoshida

Yoshida presents an electronic file system that can handle documents each having data indicated on its face and back sides. See the Abstract.

C. Brief Description of Powers

Powers discloses a technique for accomplishing copy and paste and scan to fit using a standard TWAIN data source. In Powers, the TWAIN data

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source transfers a source image that is an image of only one side of a document. *Powers* teaches that the processing of images (e.g., such as producing a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements) is handled by an image processing application, not by a TWAIN source. See *Powers* at column 10, line 59 through column 11, line 4.

D. Discussion of Independent Claim 1

The subject matter of claim 1 solves the problem of an application running on a computing device that is constrained to display only a single scanned image and is not capable of conveniently displaying to a user both sides of a scanned multi-sided document. As set out by claim 1, to a TWAIN source is added the capability to control scanning of multiple sides of a multi-sided document and to produces a composite image by tiling the images of individual sides of the multi-sided document. In this way this capability is provided to a user without requiring the user to attempt to find a new application that has this capability.

Particularly, independent claim 1 sets out a method of scanning multisided documents. In claim 1, a TWAIN source is used to control scanning of
multiple sides of a multi-sided document by a scanning device. The TWAIN
source produces a composite image by tiling the images of individual sides of
the multi-sided document vertically, horizontally, or a combination of
vertical and horizontal placements. A TWAIN protocol is used to transfer the
composite image from the TWAIN source to an application running on a
computing device. The subject matter is not disclosed nor obvious in view of
the references cited by the Examiner.

1. The examiner's failure to accurately access the scope and content of *Yoshida*.

As cited above, according to *Graham v. John Deere Co.*, the first factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to

ascertain the scope and content of the prior art. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the scope and content of *Yoshida*.

The examiner has asserted that *Yoshida* discloses use of a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device. See the Office Action dated June 10, 2008, at page 4. The examiner cites column 4 lines 10 through 15 of *Yoshida* as the basis for making this assertion.

At column 4, lines 10 through 15, discusses a user selectively determining whether to put a document in its both-side mode. Nowhere in column 4, lines 10 through 15, or anywhere else, does *Yoshida* disclose or suggest a TWAIN source or any use of a TWAIN source.

The examiner has also asserted that *Yoshida* discloses a TWAIN source producing a composite image. See the Office Action dated June 10, 2008, at page 4. The examiner cites figure 19 and column 9, line 65 through column 10, line 8 of *Yoshida* as the basis for making this assertion. Neither at these locations nor any other location does *Yoshida* disclose or suggest a TWAIN source producing a composite image.

2. The examiner's failure to accurately access the differences between the *Yoshida* and the subject matter of claim 1.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences in *Yoshida* and claim 1.

Claim 1 sets out a method of scanning multi-sided documents. The method includes three steps: step (a), step (b) and step (c). The examiner has asserted that steps (a) and (b) are disclosed by *Yoshida* and that the only difference between *Yoshida* and claim 1 is the subject matter set out in step (c).

However, Yoshida does not disclose or suggest the subject matter of step (a) or step (b) of claim 1. Therefore, the examiner has failed to accurately access the differences between the Yoshida and the subject matter of claim 1.

Particularly, step (a) of claim 1 states that a TWAIN source is used to control scanning of multiple sides of a multi-sided document by a scanning device. Such use of a TWAIN source is not disclosed or suggested by *Yoshida*.

The examiner cites column 4 lines 10 through 15 of Yoshida as disclosing step (a) of claim 1. In Yoshida, column 4, lines 10 through 15, discusses a user selectively determining whether to put a document in its both-side mode. Nowhere in column 4, lines 10 through 15, or anywhere else, does Yoshida disclose or suggest a TWAIN source or any use of a TWAIN source to control scanning of multiple sides of a multi-sided document as set out in step (a) of claim 1.

Step (b) of claim 1 sets out that the TWAIN source produces a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements. Such use of a TWAIN source is not disclosed or suggested by *Yoshida*.

The examiner cites figure 19 and column 9, line 65 through column 10, line 8 of *Yoshida* as disclosing step (b) of claim 1. However, neither at these cited locations nor in any other location does *Yoshida* disclose or suggest a using TWAIN source to produce a composite image as set out in step (b) of claim 1.

3. The examiner's failure to accurately access the differences between Powers and the subject matter of claim 1.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences in *Powers* and claim 1.

Claim 1 sets out a method of scanning multi-sided documents. The method includes three steps: step (a), step (b) and step (c). The examiner has asserted that step (c) is disclosed by *Powers*. However, the examiner has failed to ascertain the differences between what is disclosed by *Powers* and step (c) of claim 1 of the present case.

Step (c) of claim 1 sets out that a TWAIN protocol is used to transfer the composite image from the TWAIN source to an application running on a computing device.

A significant difference between step (c) of claim 1 and the subject matter disclosed by *Powers* is that step (c) of claim 1 sets out that a *composite* image is transferred. *Powers* does not disclose or suggest such a transfer of a *composite* image from a TWAIN source to an application running on a computing device. As discussed further below, *Powers* clearly teaches away from this subject matter.

In *Powers*, an image processing application controls creation of a destination image. A TWAIN source transfers a source image that is an image of only one side of a document. See *Powers* at column 6, line 10 through 45. After the application 514 receives the scan information from the TWAIN source, the application 514 makes the information available to the paster 542 which then combines the information with the destination image information where it is presented to a user. See column 10, line 59 through column 11, line 4. As seen from Figure 5, paster 542 resides in the image processing application 514, not the TWAIN image source 518.

In *Powers* the production of a composite image is handled by the image processing application, not by a TWAIN source. That is why in *Powers* a *composite* image is not transferred from the TWAIN source to an application running on a computer, as set out in step (c) of claim 1.

4. Why there is no combination of *Yoshida* and *Powers* that discloses or suggests the subject matter of claim 1.

Claim 1 sets out three steps in which (a) a TWAIN source is used to control scanning of multiple sides of a multi-sided document by a scanning

device; (b) the TWAIN source produces a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements; and (c) the composite image is transferred from the TWAIN source to an application running on a computing device. No combination of *Yoshida* or *Powers* discloses or suggests any of these three steps.

As discussed above, *Yoshida* does not disclose step (a) of claim 1, does not disclose step (b) of claim 1, and as admitted by the examiner (See the Office Action dated June 10, 2008, at page 5, lines 1 through 3), does not disclose step (c) of claim 1.

As discussed above, *Powers* does not disclose step (c) of claim 1. In addition, *Powers* does not disclose step (a) of claim 1 as nothing in *Powers* discloses or suggests using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device. *Powers* does not even mention the scanning of more than one side of a document.

Further, *Powers* does not disclose step (b) of claim 1. Nothing in *Powers* discloses or suggests a TWAIN source produces a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements. *Powers* does not even mention tiling the images of individual sides of the multi-sided document.

The only similarity between *Yoshida* and the subject matter of claim 1 is that *Yoshida* mentions scanning documents with front and back pages.

The only similarity between *Powers* and the subject matter of claim 1 is that *Powers* utilizes a TWAIN source for scanning.

Nothing in Yoshida or Powers, whether considered alone or in combination, discloses or suggests the novel steps of (a) using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device and (b) producing, by the TWAIN source, a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements, as set out in claim 1 of the present case.

5. How Yoshida and Powers teach away from the subject matter of claim 1.

A prior patent must be considered in its entirety (i.e., as a whole), including portions that would lead away from the invention in issue. *Panduit Corp. v. Dennison Manufacturing Co.*, 810 F.2d 1561, 1 U.S.P.Q.2d 1593 (Fed Cir. 1987). It is impermissible within the framework of 35 U.S.C. § 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 U.S.P.Q. 416 (Fed Cir. 1986).

That is, the courts have indicated that consideration must be given to prior art that would lead one away from the invention as well as that which is argued to lead toward it. *Mendenhall v. Astec Industries, Inc.*, 13 U.S.P.Q.2d 1913, 1939 (Tenn. 1988), *aff'd*, 13 U.S.P.Q.2d 1956 (Fed Cir. 1989). The fact that the prior art contains numerous negative teachings, which would have discouraged and deterred a person having ordinary skill in the art from making the inventions of the patents in suit, is further evidence of non-obviousness. *Mobil Oil Corp. v. W. R. Grace & Co.*, 367 F. Supp. 207, 180 U.S.P.Q. 418, 452 (Conn. 1973).

a. How Yoshida teaches away from the subject matter of claim 1.

In Yoshida, implementation of both-side mode is handled by a control program within the image processing application. This is typical in the prior art.

The subject matter of claim 1 takes an entirely different approach, moving this functionality into a TWAIN source. This is against the common practice and teaching in the prior art such as *Yoshida*. Nowhere in the prior art is this radical departure from current practice disclosed or suggested. There is nothing in the prior art that would suggest this to a practitioner in the art or motivate a practitioner in the art to make this change.

The motivation to make a specific structure is not abstract, but practical, and is always related to the properties or uses on skilled in the art would expect the structure to have, if made. The critical inquiry is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d 1248, 1250 (Fed. Cir. 1989).

The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims is not, by itself, sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of the Appellant's specification, to make the necessary changes in the reference device. Ex parte Chicago Rawhide Manufacturing Co., 226 U.S.P.Q 438 (PTO Bd. App. 1984).

There is nothing in the prior art that suggests the desirability and thus provide motivation to a person of ordinary skill in the art to modify *Yoshida* to move functionality found in an imaging processing application into a TWAIN source. The teaching to do so is a unique and non-obvious feature of the subject matter set out in claim 1.

b. How Powers teaches away from the subject matter of claim 1.

In *Powers*, an essential part of the disclosed invention is that a selected portion of the source image is scanned based on resizing parameters to generate a properly scaled copy of the selected portion of the source image. See column 4, lines 15 through 29, and claim 1 of *Powers*. This essential part of the disclosed invention of *Powers* is incompatible with the subject matter of set out in claim 1 of the present case.

For example, in step (c) of claim 1, a composite image is transferred from the TWAIN source to an application running on a computing device. The composite image is produced by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements.

This production and transfer of a composite image by the TWAIN source is not compatible with the essential feature of *Powers* invention

discussed above. That is, *Powers* requires that a selected portion of the source image is scanned based on resizing parameters to generate a properly scaled copy of the selected portion of the source image. The composite image transferred in step (c) of claim 1 would render such a generation of a properly scaled copy impossible. That is, for Powell to transfer a composite image would require the TWAIN source of Powell to completely disregard such scaling, image size and image location instructions from a TWAIN application. Thus to modify *Powers* to include the subject matter set out in step (c) of claim 1 would require the destruction of the invention set out by *Powers*. However, a modification of a reference which results in destroying that on which the invention of the reference is based should not serve as a foundation for a rejection under 35 U.S.C. § 103. See, for example, *Ex parte Hartmann*, 186 U.S.P.Q. 366, 367 (PTO Bd. App. 1974).

6. No reasonable expectation of success.

The lack of an expectation of success supports a finding of nonobviousness. See In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976). The TWAIN source of Powell, (based on the TWAIN specification itself) does not anticipate the transfer of a composite image from a TWAIN source to an application running on a computing device when the composite image is produced by tiling the images of individual sides of a multi-sided document as set out in claim 1. When an application requests an image from the TWAIN source of a scanner, the return, as set out in claim 1, of a composite image can be twice (if two-sided scanning is employed) or even more (if a multiple sided document with greater than two times) the size expected by the application. This can have unexpected results that, depending upon how an application is written, could crash the application and or the computer. Since the return of such a composite document is outside the published specification/protocol of the TWAIN source, an person of ordinary skill in the art would have no way to know, outside of experimentation, whether making such a drastic change in the functioning of the TWAIN source would

be successful or disastrous. This lack of a reasonable expectation of success in implementing claim 1 supports a finding of non-obviousness of claim 1.

E. Discussion of Independent Claim 7

The subject matter of claim 7 in pertinent part differs from the subject matter set out in claim 1 in that claim 7 sets out that the single composite image produced by the TWAIN source is composed of vertically tiled images. Each of the vertically tiled images is an image of one side of the multi-sided document. The single composite image is transferred by sequentially scanning and transferring consecutive image rows of each side of the multi-sided document using a TWAIN buffered memory transfer method.

The above-described additional feature of claim 7 is independently patentable over the subject matter set out in claim 1 and is not disclosed nor obvious in view of the references cited by the examiner.

1. The examiner's failure to accurately access the scope and content of *Yoshida*.

As cited above, according to *Graham v. John Deere Co.*, the first factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the scope and content of the prior art. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the scope and content of *Yoshida*.

The examiner has asserted that *Yoshida* discloses use of a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device. See the Office Action dated June 10, 2008, at page 8. The examiner cites scanner 6 of Figure 1 and column 4 lines 10 through 30 of *Yoshida* as the basis for making this assertion.

As discussed above, neither in figure 1, column 4 nor anywhere else does *Yoshida* disclose or suggest a TWAIN source or any use of a TWAIN source.

2. The examiner incorrectly asserts that *Yoshida* discloses step (b) of claim 7 and then specifically concedes that *Yoshida* does not disclose step (b) of claim 7.

In the Office Action dated June 10, 2008, at page 9, lines 1 through 6, the examiner asserts that *Yoshida* discloses a single composite image is transferred by sequentially scanning and transferring consecutive image rows of each side of the multi-sided document using a TWAIN buffered memory transfer method. The examiner cites figure 19 and column 9, line 65 through column 10, line 8 of *Yoshida* as the basis for making this assertion.

In Yoshida, Figure 19 shows the result of the electronic filing system combining image data, which is then registered. See column 9, line 65 through column 10, line 8 of Yoshida. However, the electronic filing system of Yoshida is not a TWAIN source, and within Yoshida composite images are not transferred by sequentially scanning and transferring consecutive image rows of each side of a multi-sided document using a TWAIN buffered memory transfer method, as set out in step (b) of claim 7. The examiner's assertions to the contrary are factually incorrect.

Furthermore, in the Office Action dated June 10, 2008, at page 9, lines 7 through 10, the examiner specifically concedes that *Yoshida* does not disclose a TWAIN source producing a composite image that is composed of vertically tiled images.

3. The examiner's failure to accurately access the scope and content of *Powers*.

As cited above, according to *Graham v. John Deere Co.*, the first factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the scope and content of the prior art. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the scope and content of *Powers*.

In the Office Action dated June 10, 2008, at page 9, lines 11 through 19, the examiner asserts that *Powers* teaches that a single composite image composed of vertically tiled images is produced by a TWAIN source and then

transferred from the TWAIN source to a TWAIN application. This is factually incorrect.

As discussed above, nothing in *Powers* discloses or suggests a TWAIN source produces a composite image by vertically tiling images. In fact, production by a TWAIN source of a composite image by vertically tiling images, which is subsequently transferred to a TWAIN application, is completely incompatible with the invention of *Powers*.

That is, an essential part of the disclosed invention of *Powers* is that a selected portion of the source image is scanned based on resizing parameters to generate a properly scaled copy of the selected portion of the source image. See column 4, lines 15 through 29, and claim 1 of *Powers*. Production by a TWAIN source of a composite image by vertically tiling images, which is subsequently transferred to a TWAIN application (as set out in step (b) of claim 7) is completely incompatible with *Powers* requirement that a scanned portion of a source image be a properly scaled copy of the selected portion of the source image. When composing the composite image by vertically tiling images, the TWAIN source would need to completely disregard such scaling, image size and image location instructions from a TWAIN application.

4. The examiner's failure to accurately access the differences between the *Yoshida* and the subject matter of claim 7.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences in *Yoshida* and claim 7.

Claim 7 sets out a method of scanning multi-sided documents. The method includes two steps: step (a) and step (b). The examiner has asserted that step (a) is disclosed by *Yoshida*. The examiner has asserted step (b) is disclosed by *Yoshida*, but then specifically concedes the subject matter of step (b) is not disclosed by *Yoshida*. See the Office Action dated June 10, 2008, at page 8, line 16 through page 9, line 10.

Yoshida does not disclose or suggest the subject matter of step (a) or step (b) of claim 7. Therefore, the examiner has failed to accurately access the differences between the Yoshida and the subject matter of claim 1.

Particularly, step (a) of claim 7 states that a TWAIN source is used to control scanning of multiple sides of a multi-sided document by a scanning device. Such use of a TWAIN source is not disclosed or suggested by Yoshida.

The examiner cites scanner 6 of Figure 1 and column 4 lines 10 through 30 of *Yoshida*. However, Nowhere in column 4, lines 10 through 30, nor anywhere else, does *Yoshida* disclose or suggest a TWAIN source or any use of a TWAIN source to control scanning of multiple sides of a multi-sided document as set out in step (a) of claim 7.

5. The examiner's failure to accurately access the differences between the *Powers* and the subject matter of claim 7.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences between *Powers* and claim 7.

Claim 7 sets out a method of scanning multi-sided documents. The method includes two steps: step (a) and step (b). The examiner has asserted that step (b) is disclosed by *Powers*. However, the examiner has failed to ascertain the differences between what is disclosed by *Powers* and step (b) of claim 7 of the present case.

Step (b) of claim 7 sets out that a TWAIN protocol is used to transfer the composite image from the TWAIN source to an application running on a computing device, where the tiled image is composed of vertically tiled images, each of the vertically tiled images being an image of one side of the multi-sided document

Powers does not disclose or suggest such a transfer of a composite image from a TWAIN source to an application running on a computing device. As pointed out above, Powers clearly teaches away from this subject matter.

In *Powers*, an image processing application controls creation of a destination image. A TWAIN source transfers a source image that is an image of only one side of a document. See *Powers* at column 6, line 10 through 45. After the application 514 receives the scan information from the TWAIN source, the application 514 makes the information available to the paster 542 which then combines the information with the destination image information where it is presented to a user. See column 10, line 59 through column 11, line 4. As seen from Figure 5, paster 542 resides in the image processing application 514, not the TWAIN image source 518. Thus in *Powers* a *composite* image is not transferred from the TWAIN source to an application running on a computer, as set out in step (b) of claim 7.

6. Why there is no combination of *Yoshida* and *Powers* that discloses or suggests the subject matter of claim 7.

Claim 7 sets out two steps in which (a) a TWAIN source is used to control scanning of multiple sides of a multi-sided document by a scanning device; (b) the TWAIN source produces and transfers a composite image composed of vertically tiled images. No combination of *Yoshida* or *Powers* discloses or suggests any of these two steps.

As discussed above, *Yoshida* does not disclose step (a) of claim 7, and as admitted by the examiner (See the Office Action dated June 10, 2008, at page 9, lines 7 through 10), does not disclose step (b) of claim 7.

As discussed above, *Powers* does not disclose step (a) of claim 7 as nothing in *Powers* discloses or suggests using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device. *Powers* does not even mention the scanning of more than one side of a document.

Further, *Powers* does not disclose step (b) of claim 7. Nothing in *Powers* discloses or suggests a TWAIN source produces a composite image composed of vertically tiled images. *Powers* does not even mention tiling the images of individual sides of the multi-sided document.

The only similarity between Yoshida and the subject matter of claim 7 is

that Yoshida mentions scanning documents with front and back pages.

The only similarity between *Powers* and the subject matter of claim 7 is that *Powers* utilizes a TWAIN source for scanning.

Nothing in Yoshida or Powers, whether considered alone or in combination, discloses or suggests the novel steps of (a) using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device and (b) producing, by the TWAIN source, a composite image of vertically tiled the images of individual sides of the multi-sided document vertically, as set out in claim 7 of the present case.

7. How Yoshida and Powers teach away from the subject matter of claim 7.

In Yoshida, implementation of both-side mode is handled by a control program within the image processing application. This is typical in the prior art.

The subject matter of claim 7 takes an entirely different approach, moving this functionality into the TWAIN source. This is against the common practice and teaching in the prior art such as *Yoshida*. Nowhere in the prior art is this radical departure from current practice disclosed or suggested. There is nothing in the prior art that would suggest this to a practitioner in the art or motivate a practitioner in the art to make this change.

There is nothing in the prior art that suggests the desirability and thus provides motivation to a person of ordinary skill in the art to modify *Yoshida* to move functionality found in an imaging processing application into a TWAIN source. The teaching to do so is a unique and non-obvious feature of the subject matter set out in claim 7.

In *Powers*, an essential part of the disclosed invention is that a selected portion of the source image is scanned based on resizing parameters to generate a properly scaled copy of the selected portion of the source image. See column 4, lines 15 through 29, and claim 1 of *Powers*. This essential part of the disclosed invention of *Powers* is incompatible with the subject matter of

set out in claim 7 of the present case. That is, for Powell to transfer a composite image would require the TWAIN source of Powell to completely disregard scaling, image size and image location instructions from a TWAIN application.

For example, in step (b) of claim 7, a composite image is transferred from the TWAIN source to an application running on a computing device. The composite image is composed of tiled vertical images of individual sides of the multi-sided document.

This production and transfer of a composite image by the TWAIN source is not compatible with the essential feature of *Powers* invention discussed above. That is, *Powers* requires that a selected portion of the source image is scanned based on resizing parameters to generate a properly scaled copy of the selected portion of the source image. The composite image transferred in step (c) of claim 7 would render such a generation of a properly scaled copy impossible. Thus to modify *Powers* to include the subject matter set out in step (b) of claim 7 would require the destruction of the invention set out by *Powers*.

8. No reasonable expectation of success.

As discussed above, the lack of an expectation of success supports a finding of nonobviousness. The TWAIN source of Powell, (based on the TWAIN specification itself) does not anticipate the transfer of a composite image from a TWAIN source to an application running on a computing device when the composite image is produced by tiling the images of individual sides of a multi-sided document as set out in claim 7. When an application requests an image from the TWAIN source of a scanner, the return, as set out in claim 1, of a composite image can be twice (if two-sided scanning is employed) or even more (if a multiple sided document with greater than two times) the size expected by the application. This can have unexpected results that, depending upon how an application is written, could crash the application and or the computer. Since the return of such a composite document is outside the published specification/protocol of the

TWAIN source, an person of ordinary skill in the art would have no way to know, outside of experimentation, whether making such a drastic change in the functioning of the TWAIN source would be possible or disastrous. This lack of a reasonable expectation of success in implementing claim 7 supports a finding of non-obviousness of claim 7.

F. Discussion of Independent Claim 13

The subject matter of claim 13 in pertinent differs from claim 1 and claim 7 in that that claim 13 sets out that a TWAIN source user interface is displayed which allows a user to select scanning of a multi-sided document.

The above-described additional feature of claim 13 makes claim 13 independently patentable from the subject matter set out in claim 1 and claim 7.

1. The examiner's failure to accurately access the scope and content of Yoshida.

As cited above, according to *Graham v. John Deere Co.*, the first factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the scope and content of the prior art. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the scope and content of *Yoshida*.

The examiner has asserted that *Yoshida* teaches that when scanning of a multi-sided document is selected by the user, a TWAIN source creates a single composite image that includes images of all sides of the multi-sided document and forwards the single composite image from the TWAIN source to an application running on a computing system. See the Office Action dated June 10, 2008, at page 13. The examiner cites Figure 1 and column 4 lines 10 through 15 and column 3, lines 5 through 8 of *Yoshida* as the basis for making this assertion.

As further discussed above, neither in figure 1, column 3, column 4 nor anywhere else does *Yoshida* disclose or suggest a TWAIN source or any use of a TWAIN source.

2. The examiner's failure to accurately access the scope and content of *Powers*.

As cited above, according to *Graham v. John Deere Co.*, the first factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the scope and content of the prior art. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the scope and content of *Powers*.

In the Office Action dated June 10, 2008, at page 13, line 8 through page 14 line 5, the examiner asserts that *Powers* teaches a TWAIN source user interface that allows a user to select scanning of a multi-sided document. An example of a TWAIN source user interface can be seen in Appellant's Figure 4. The examiner's assertion that *Powers* teaches a TWAIN source user interface that allows a user to select scanning of a multi-sided document is not only factually incorrect, but contradicts *Powers* specifically stated intention to avoid such a use of a TWAIN source user interface.

The examiner cites *Powers* at Figure 5 and at column 10, lines 1 through 10 and column 10, lines 50 through 68 of *Powers* to support the examiner's assertion that *Powers* teaches a TWAIN source user interface feature. Figure 5 shows a block diagram of a TWAIN compliant image processing system and does not mention anything about a TWAIN source user interface. Likewise, nothing in *Powers* at column 10, lines 1 through 10 nor column 10, lines 50 through 68 mentions anything about a TWAIN source user interface.

Powers mentions the existence of a TWAIN source user interface at column 3, lines 43 through column 4, line 6. There Powers points out why Powers believes use of a TWAIN source user interface should be avoided. Powers states that use of a TWAIN source user interface is frustrating and time consuming. See column 4, line 6. Because of this, Powers specifically indicates at column 4, lines 7 through 11, that the motivation for the invention of Powers is to provide for an automatic scanning process that reduces use of a

TWAIN source user interface.

In column 6, lines 10 through 45, *Powers* indicates that the TWAIN source user interface is only used to allow a user to select which portion of the source image is to be copied and pasted in the selected target area. See column 6, lines 19 through 25. See also a full explanation of *Powers* use of the TWAIN source user interface at column 7, line 53 through column 8, line 48. Nothing in *Powers* description of use of a TWAIN source user interface event remotely suggests that a TWAIN source user interface could be used to allow a user to select scanning of a multi-sided document.

3. The examiner's failure to accurately access the differences between the *Yoshida* and the subject matter of claim 13.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences in *Yoshida* and claim 13.

Claim 13 sets out a method of scanning multi-sided documents. The method includes two steps: step (a) and step (b). The examiner has asserted that step (b) is disclosed by *Yoshida*.

Particularly, step (b) of claim 13 states that a TWAIN source is used to control scanning of multiple sides of a multi-sided document by a scanning device. Such use of a TWAIN source is not disclosed or suggested by Yoshida.

The examiner cites scanner 6 of Figure 1 and column 4 lines 10 through 15 of *Yoshida*. However, Nowhere in column 4, lines 10 through 15, nor anywhere else, does *Yoshida* disclose or suggest a TWAIN source or any use of a TWAIN source to control scanning of multiple sides of a multi-sided document as set out in step (b) of claim 13.

Further step (b) states that the single composite image is forwarded from the TWAIN source to an application running on a computing system. See the Office Action dated June 10, 2008, at page 13, lines 4 through 14. While on page 13, the examiner asserts this is disclosed by *Yoshida*, in other locations

in the same Office action, the examiner concedes this feature is not taught by *Yoshida*. See for example, the Office Action dated June 10, 2008, at page 5, lines 1 through 3 and page 9, lines 7 through 10.

4. The examiner's failure to accurately access the differences between the *Powers* and the subject matter of claim 13.

As cited above, according to *Graham v. John Deere Co.*, the second factual inquiry to be made when determining obviousness under 35 U.S.C. § 103 is to ascertain the differences between the prior art and the claims at issue. The examiner has failed to accurately make this factual inquiry, incorrectly ascertaining the differences in *Powers* and claim 13.

Claim 13 sets out a method of scanning multi-sided documents. The method includes two steps: step (a) and step (b). The examiner has asserted that step (a) is disclosed by *Powers*. However, the examiner has failed to ascertain the differences between what is disclosed by *Powers* and step (a) of claim 13 of the present case.

Step (a) of claim 13 sets out the display of a TWAIN source user interface which allows a user to select scanning. The display of a TWAIN source user interface which allows a user to select scanning is not disclosed or suggested by *Powers*.

As discussed above, the examiner cites *Powers* at Figure 5 and at column 10, lines 1 through 10 and at column 10, lines 50 through 68 as disclosing this feature. Figure 5 shows a block diagram of a TWAIN compliant image processing system and does not mention anything about a TWAIN source user interface. Likewise, nothing in *Powers* at column 10, lines 1 through 10 nor column 10, lines 50 through 68 mentions anything about a TWAIN source user interface.

Powers mentions the existence of a TWAIN source user interface at column 3, lines 43 through column 4, line 6. There Powers points out why Powers believes use of a TWAIN source user interface should be avoided.

Powers states that use of a TWAIN source user interface is frustrating and time consuming. See column 4, line 6. Because of this, Powers specifically indicates

at column 4, lines 7 through 11, that the motivation for the invention of Powers is to provide for an automatic scanning process that reduces use of a TWAIN source user interface.

In column 6, lines 10 through 45, *Powers* indicates that the TWAIN source user interface is only used to allow a user to select which portion of the source image is to be copied and pasted in the selected target area. See column 6, lines 19 through 25. See also a full explanation of *Powers* use of the TWAIN source user interface at column 7, line 53 through column 8, line 48. Nothing in *Powers* description of use of a TWAIN source user interface event remotely suggests that a TWAIN source user interface could be used to allow a user to select scanning of a multi-sided document.

5. Why there is no combination of *Yoshida* and *Powers* that discloses or suggests the subject matter of claim 13.

Claim 13 sets out two steps in which (a) there is displayed a TWAIN source user interface which allows a user to select scanning of a multi-sided document; and (b) the TWAIN source is used to control scanning performed by a scanning device, where scanning of a multi-sided document is selected by the user. The TWAIN source creates a single composite image that includes images of all sides of the multi-sided document. The TWAIN source forwards the single composite image from the TWAIN source to an application running on a computing system. No combination of *Yoshida* or *Powers* discloses or suggests any of these two steps.

As discussed above, *Yoshida* does not disclose step (b) of claim 13, and as admitted by the examiner (See the Office Action dated June 10, 2008, at page 13, lines 15 through 17), does not disclose step (a) of claim 13.

As discussed above, *Powers* does not disclose step (a) of claim 13 as nothing in *Powers* discloses or suggests using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device. *Powers* does not even mention the scanning of more than one side of a document.

Further, Powers does not disclose step (b) of claim 13. Nothing in

Powers discloses or suggests displaying a TWAIN source user interface which allows a user to select scanning of a multi-sided document. Powers mentions a TWAIN source user interface in the context of Power's invention being for the purpose of reducing use of a TWAIN source user interface.

The only similarity between *Yoshida* and the subject matter of claim 1 is that *Yoshida* mentions scanning documents with front and back pages.

The only similarity between *Powers* and the subject matter of claim 1 is that *Powers* utilizes a TWAIN source for scanning.

Nothing in *Yoshida* or *Powers*, whether considered alone or in combination, discloses or suggests the novel method set out in claim 13 of the present case.

6. How Yoshida and Powers teach away from the subject matter of claim 13.

In Yoshida, implementation of both-side mode is handled by a control program with in the image processing application. This is typical in the prior art.

The subject matter of claim 13 takes an entirely different approach, moving this functionality into TWAIN source. This is against the common practice and teaching in the prior art such as *Yoshida*. Nowhere in the prior art is this radical departure from current practice disclosed or suggested. There is nothing in the prior art that would suggest this to a practitioner in the art or motivate a practitioner in the art to make this change.

There is nothing in the prior art that suggests the desirability and thus provides motivation to a person of ordinary skill in the art to modify *Yoshida* to move functionality found in an imaging processing application into a TWAIN source. The teaching to do so is a unique and non-obvious feature of the subject matter set out in claim 13.

Powers, as discussed above, specifically indicates at column 4, lines 7 through 11, that the motivation for the invention of *Powers* is to provide for an automatic scanning process that eliminates use of a TWAIN source user interface. This is a direct teaching away from step (a) of claim 13, where a

TWAIN source user interface that allows a user to select scanning of a multisided document is displayed to a user. Thus *Powers* teaches away from the very feature of claim 13 that the examiner asserts is taught by *Powers*.

7. No reasonable expectation of success.

As discussed above, the lack of an expectation of success supports a finding of nonobviousness. The TWAIN source of Powell, (based on the TWAIN specification itself) does not anticipate the transfer of a composite image from a TWAIN source to an application running on a computing device when the composite image is produced by tiling the images of individual sides of a multi-sided document as set out in claim 13. When an application requests an image from the TWAIN source of a scanner, the return, as set out in claim 1, of a composite image can be twice (if two-sided scanning is employed) or even more (if a multiple sided document with greater than two times) the size expected by the application. This can have unexpected results that, depending upon how an application is written, could crash the application and or the computer. Since the return of such a composite document is outside the published specification/protocol of the TWAIN source, an person of ordinary skill in the art would have no way to know, outside of experimentation, whether making such a drastic change in the functioning of the TWAIN source would be possible or disastrous. This lack of a reasonable expectation of success in implementing claim 13 supports a finding of non-obviousness of claim 13.

CONCLUSION

For all the reasons discussed above, Appellant believes the rejection of the claims was in error and respectfully requests that the rejection be reversed.

Respectfully submitted.
HIN LEONG TAN

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APPENDIX: APPEALED CLAIMS

- 1. A method of scanning multi-sided documents, comprising:
- (a) using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device;
- (b) producing, by the TWAIN source, a composite image by tiling the images of individual sides of the multi-sided document vertically, horizontally, or a combination of vertical and horizontal placements; and
- (c) transferring, using a TWAIN protocol, the composite image from the TWAIN source to an application running on a computing device.
- 2. The method of claim 1, wherein the scanning of multiple sides of the multi-sided document includes:

prompting a user to insert a next side of the multi-sided document in the scanning device;

detecting a ready response when the next side of the multi-sided document is ready for scanning; and,

scanning the next side of the multi-sided document when the ready response is received.

- 3. The method of claim 2, wherein the detecting includes reading an ON/OFF status of a document sensor on the scanning device.
- 4. The method of claim 1, further comprising displaying a TWAIN source user interface for a user to select or edit scanning parameters and options.
- 5. The method of claim 4, wherein the TWAIN source user interface includes at least one of the following:

an option to select single or multi-sided scanning;

an option to enable the use of a document sensor to automatically start scanning when a document is detected on the scanning device.

- 6. The method of claim 1, wherein the multi-sided document is a card.
- 7. A method of scanning multi-sided documents, comprising:
- (a) using a TWAIN source to control scanning of multiple sides of a multi-sided document by a scanning device;
- (b) transferring a single composite image for the multi-sided document from the TWAIN source to a TWAIN application, the single composite image being produced by the TWAIN source and being composed of vertically tiled images, each of the vertically tiled images being an image of one side of the multi-sided document, wherein the single composite image is transferred by sequentially scanning and transferring consecutive image rows of each side of the multi-sided document using a TWAIN buffered memory transfer method.
- 8. The method of claim 7, wherein the scanning of multiple sides of the multi-sided document includes:

prompting a user to insert a next side of the multi-sided document in the scanning device;

detecting a ready response when he next side of the multi-sided document is ready for scanning; and,

scanning the next side of the multi-sided document when the ready response is received.

- 9. The method of claim 8, wherein the detecting includes reading the ON/OFF status of a document sensor on the scanning device.
- 10. The method of claim 8, further comprising displaying a TWAIN source user interface for the user to select or edit scanning parameters.
- 11. The method of claim 10, wherein the TWAIN source user interface includes at least one of the following:

an option to select single or multi-sided scanning;

an option to enable the use of the document sensor to start scanning when a document is detected.

- 12. The method of claim 7, wherein the multi-sided document is a card.
- 13. A method of scanning documents, comprising:
- (a) displaying a TWAIN source user interface which allows a user to select scanning of a multi-sided document; and,
- (b) controlling, by use of a TWAIN source, scanning performed by a scanning device, including,

when scanning of a multi-sided document is selected by the user, creating, by the TWAIN source, a single composite image that includes images of all sides of the multi-sided document and forwarding the single composite image from the TWAIN source to an application running on a computing system.

- 14. The method of claim 13, further comprising: closing automatically the user interface when the scanning starts or when the scanning is completed.
 - 15. The method of claim 13, wherein the document is a card.
- 16. The method of claim 13, additionally comprising:

 providing an option in the TWAIN source user interface to
 enable/disable the use of a document sensor and when the document sensor
 is enabled, controlling scanning by the TWAIN source includes:

waiting for user input to the user interface,

checking the status of the document sensor on the scanning device when the use of the sensor is enabled, and

scanning automatically when a document is detected at the sensor when the use of the sensor is enabled.

- 17. The method of claim 2, wherein the detecting includes receiving user input from a keyboard, a mouse, a voice activated device, or a button on the scanning device.
- 18. The method of claim 8, wherein the detecting includes receiving user input from a keyboard, a mouse, a voice activated device, or a button on the scanning device.

EVIDENCE APPENDIX

No evidence under §§ 1.130, 1.131, or 1.132 is relied upon by appellant in the appeal.

RELATED PROCEEDINGS APPENDIX

There are no related decisions rendered by a court or the Board.